

Interview Summary	Application No.	Applicant(s)	
	10/553,849	SAKA ET AL.	
	Examiner Pegah Parvini	Art Unit 1755	

All participants (applicant, applicant's representative, PTO personnel):

(1) Pegah Parvini. (3) _____.

(2) H. Jay Spiegel. (4) _____.

Date of Interview: 25 September 2007.

Type: a) Telephonic b) Video Conference
c) Personal [copy given to: 1) applicant 2) applicant's representative]

Exhibit shown or demonstration conducted: d) Yes e) No.

If Yes, brief description: 7 pages of facsimile received on September 26, 2007 containing new amendment to claim 1.

Claim(s) discussed: 6-9.

Identification of prior art discussed: N/A.

Agreement with respect to the claims f) was reached. g) was not reached. h) N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner.
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Mr. H. Jay Spiegel telephoned the examiner on September 25, 2007 to find out that if the claims were amended so to place the application in condition for allowance, would this amendment be entered after Final; also, to verify if claim 6, which was an independent claim, and its dependent claims, claims 7-9, should have been allowed in the Office Action mailed on September 7, 2007 and not being indicated as allowable subject matter. The examiner reviewed the case and responded Mr. Spiegel in a second telephone conversation that claim 6 and its dependent claims, claims 7-9, should have been indicated as allowed claims. In addition, regarding the amendment after Final Action, the examiner pointed out that the new amendment to the claims/application may be faxed to her; they will be reviewed and if they place the application in condition for allowance, they will be entered.

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September 26, 2007

Pegah Parvini
 Art Unit 1755
 c/o Commissioner for Patents
 P.O. Box 1450
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VIA FACSIMILE

Re: U.S. Patent Application on SURFACE
 TOUGHENED METHOD OF SINTERED
 MATERIAL CUTTING TOOL AND A
 LONG LIFE SINTERED MATERIAL
 CUTTING TOOL
 Serial No. 10/533,849
 Filed: October 20, 2005
Our Ref.: TAN-355

Dear Examiner Parvini:

As per our telephone interview yesterday, I am writing to forward you, for filing and entry, an Amendment under 37 C.F.R. 1.116 in the above-referenced U.S. patent application. The Amendment, including the justification for its entry at this time, are self-explanatory. Please let me know if you have any questions. Thank you, in advance, for your consideration.

Very truly yours,

H. JAY SPIEGEL & ASSOCIATES

H. Jay Spiegel

HJS:tg
 Enclosure

*OK to Enter
 P.P.*

TAN-355

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Hiroyasu SAKA, et al.

Serial No.: 10/533,849

Group: 1755

Filed: October 20, 2005

Examiner: P. Parvini

FOR: SURFACE TOUGHENED METHOD OF SINTERED MATERIAL CUTTING TOOL
AND A LONG LIFE SINTERED MATERIAL CUTTING TOOL

Date: September 26, 2007

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450AMENDMENT UNDER 37 C.F.R. 1.116

Sir:

This is in reply to the Office Action dated September 7, 2007, to which a response is due on or before December 7, 2007.

Please amend the application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A method for surface toughening of a ceramics sintered material cutting tool comprising, plastic working said ceramics sintered material cutting tool with an abrasive composed of fine particles, said fine particles having a convexly curved surface and an average particle size of $0.1\mu\text{m}$ to $200\mu\text{m}$ and a Vickers hardness (HV) ranging from 500 to a value which is the hardness of said sintered material cutting tool plus 50, whereby a uniformly distributed linear dislocation structure is formed in subsurface regions of the ceramics sintered material cutting tool, said plastic working being carried out by shot blasting said sintered material cutting tool with said abrasive particles at a pressure of 0.1 to 0.5 MPa, a shot blasting speed of 20m/sec to 250m/sec, a shot blasting amount of 50 g/m to 800 g/m and a shot blasting time of 0.1 sec/cm² or more to 60sec/cm² or less.

2. (Original) The method for surface toughening of a ceramics sintered material cutting tool of claim 1, wherein the dislocation density of uniformly distributed linear dislocation structure in the sub-surface regions of the ceramics sintered material cutting tool is in the range of from 1×10^4 to $9\times 10^{13} \text{ cm}^{-2}$.

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Previously Presented) A method for surface toughening of a ceramics sintered material cutting tool comprising plastic working said cutting tool with an abrasive composed of fine particles, said particles having a convex curved surface, an average particle size of 0.1 μm to 200 μm and a Vickers hardness (HV) ranging from 500 to a value which is the hardness of said sintered material cutting tool plus 50, said plastic working being carried out by shot blasting said sintered material cutting tool with said abrasive particles at a pressure of 0.1 to 0.5 MPa, a shot blasting speed of 20m/sec to 250m/sec, a shot blasting amount of 50 g/m to 800 g/m and a shot blasting time of 0.1 sec/cm² or more to 60sec/cm² or less, whereby a uniformly distributed linear dislocation structure is formed in subsurface regions of the ceramics sintered material cutting tool.

7. (Previously Presented) The method of claim 6 wherein the dislocation density of uniformly distributed linear dislocation structure in the subsurface regions of the ceramics sintered material cutting tool is in the range of from 1×10^4 to 9×10^{13} cm⁻².

8. (Previously Presented) The method of claim 6 wherein the abrasive particles are selected from the group consisting of zircon, zirconia and mullite.

9. (Previously Presented) The method of claim 6 wherein the surface toughened ceramics sintered material cutting tool is made of ceramics of silicon nitride or alumina or of high hardness distributed composite material.

10. (Previously Presented) The method of claim 1 wherein the hardness of said abrasive particles is less than the hardness of said ceramics sintered material cutting tool.

REMARKS

By this Amendment, Claim 1 has been amended to incorporate therein the limitations of Claim 3 and Claims 4 and 5 have been deleted, to place this application in immediate condition for allowance.

In the outstanding Office Action, the Examiner indicated that Claims 3, 4 and 6-9 were objected to, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim. In reviewing these claims, it was determined that Claim 6 is independent and Claims 7-9 each depend from Claim 6. Accordingly, it appeared that these claims should have been allowed rather than objected to.

Accordingly, the undersigned conducted a telephone interview with Examiner Parvini on September 25, 2007, to inquire as to whether, in fact, Claims 6-9 should have been allowed without further amendment. Examiner Parvini agreed to review the file and telephone back. The same day, Examiner Parvini telephoned back and confirmed that Claims 6-9 are allowable as previously presented.

Given the objection to Claims 3 and 4, with Claim 3 previously dependent from Claim 1, and Claim 4 previously dependent from Claim 3, Claim 1 has been amended to incorporate therein the limitations of Claim 3. Since Claim 4 recited the

same subject matter as Claim 2, Claim 4 has been deleted along with Claim 3. Additionally, Claim 5 has been deleted.

With these amendments, the remaining claims are Claims 1, 2 and 6-10, with Claim 10 dependent from Claim 1. Based upon the amendments to Claim 1, Claims 1, 2 and 10 are allowable. Based upon the telephone interview with Examiner Parvini, Claims 6-9 should be allowed.

Although this amendment is presented after a final rejection, it should be entered and the application should be allowed as a result. The amendment completely eliminates any and all issues that might be present on appeal by rewriting Claim 1 to incorporate the limitations of Claim 3 which was indicated as allowable by the Examiner, and by deleting rejected Claim 5. Claims 6-9 are allowable as previously presented based upon the telephone interview with Examiner Parvini.

Accordingly, entry of this amendment, reconsideration and allowance of this application are respectfully solicited.

Respectfully submitted,

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